

What is claimed is:

1. A low profile commercial greenhouse adapted for growing plants, comprising:

a housing having an upper end, a lower end and a polygonal or cylindrical shape, the housing defining a plant retaining space adapted to receive growing plants, the plant retaining space having a height sufficient to provide a predetermined amount of spatial clearance between the upper end of the housing and an upper end of plants growing therein to permit circulation of air and other fluids about at least a portion of the plants growing therein while having a height sufficiently short that prevents a grower of plants from physically entering the plant retaining space of the housing; and means for moving plants disposed in the plant retaining space of the housing in relation to the housing of the low profile commercial greenhouse.

2. The low profile commercial greenhouse of claim 1 wherein the lower end of the housing is closed, thereby forming a base.

3. The low profile commercial greenhouse of claim 2 wherein the means for moving plants disposed in the plant retaining space of the housing in relation

to the housing of the low profile commercial greenhouse is further defined as a conveyor system disposed in the plant retaining space of the housing such that plants disposed on the conveyor system can be moved in the plant retaining space and to enhance insertion and/or removal of the plants from the plant retaining space of the housing of the low profile commercial greenhouse.

4. The low profile commercial greenhouse of claim 3 wherein the housing is provided with at least one opening through which the conveyor system extends, thereby providing an entry and/or an exit for plants from the plant retaining space of the housing of the low profile commercial greenhouse.

5. The low profile commercial greenhouse of claim 1 wherein the upper end of the housing is further defined as a light-transmitting upper end.

6. The low profile commercial greenhouse of claim 1 wherein the upper end of the housing is further defined as a closed upper end, and wherein at least a portion of the closed upper end is light-transmitting.

7. The low profile commercial greenhouse of claim 1 wherein at least a portion of the upper end is movable independently of the rest of the housing, thereby

forming a lid or door which provides an individual access to the plant retaining space of the housing.

8. The low profile commercial greenhouse of claim 1 wherein the housing is sealed such that the housing is substantially gas and liquid impermeable, whereby the plant retaining space of the housing is provided with an atmosphere disposed therein.

9. The low profile commercial greenhouse of claim 8 wherein the housing is provided with at least one aperture whereby the atmosphere provided in the plant retaining space of the housing may be modified by at least one of injecting a disinfectant, injecting water, varying oxygen, carbon dioxide, nitrogen and/or other gas concentrations, varying temperature, varying humidity, varying intensity of light or spectrum of light from natural sources, and combinations thereof.

10. The low profile commercial greenhouse of claim 1 wherein the housing is substantially gas permeable, and the plant retaining space of the housing is provided with an atmosphere disposed therein wherein the atmosphere provided in the plant retaining space of the housing may be modified by at least one of injecting a disinfectant, injecting water, injecting nutrients, varying

oxygen, carbon dioxide, nitrogen and/or other gas concentrations, varying temperature, varying humidity, varying intensity of light or spectrum of light from natural sources, and combinations thereof.

11. The low profile commercial greenhouse of claim 10 wherein the housing is substantially liquid impermeable.

12. The low profile commercial greenhouse of claim 10 wherein the housing is liquid permeable.

13. The low profile commercial greenhouse of claim 1 wherein artificial lighting is provided in the housing, and wherein intensity of light and spectrum of light from the artificial light source can be varied within the housing of the low profile commercial greenhouse.

14. The low profile commercial greenhouse of claim 1 wherein the housing has a cylindrical shape.

15. The low profile commercial greenhouse of claim 1 wherein at least a portion of a sidewall of the housing of the low profile commercial greenhouse is inflatable.

16. A method for growing plants, comprising:

providing a low profile commercial greenhouse comprising:

a housing having an upper end and a lower end, the housing having a polygonal or cylindrical shape, the housing defining a plant retaining space adapted to receive growing plants, the plant retaining space having a height sufficient to provide a predetermined amount of spatial clearance between the upper end of the housing and an upper end of plants growing therein to permit circulation of air and other fluids about at least a portion of the plants growing therein while having a height sufficiently short that prevents a grower of plants from physically entering the plant retaining space of the housing; and

means for moving plants disposed in the plant retaining space of the housing in relation to the housing of the low profile commercial greenhouse;

providing plants to be grown therein;

disposing the plants in the plant retaining space of the housing;

moving the plants in relation to the housing of the low profile commercial greenhouse such that the plants receive adequate exposure to light;

feeding and watering the plants growing within the low profile commercial greenhouse until the plants mature to a marketable size; and
removing the plants from the housing of the low profile commercial greenhouse.

17. The method of growing plants of claim 16 wherein, in the step of providing a low profile commercial greenhouse, the lower end of the housing is closed, thereby forming a base.

18. The method of growing plants of claim 16 wherein, in the step of providing a low profile commercial greenhouse, the upper end of the housing is light-transmitting.

19. The method of growing plants of claim 16 wherein, in the steps of providing a low profile commercial greenhouse, disposing the plants in the plant retaining space of the housing and removing the plants from the housing of the low profile commercial greenhouse, at least a portion of the housing is movable independently of the rest of the housing, thereby forming a lid or door which provides an individual access to the plant retaining space of the housing for

disposing and removing the plants from the plant retaining space of the housing of the low profile commercial greenhouse.

20. The method of growing plants of claim 16 wherein the step of disposing the plant plants in the plant retaining space of the housing further comprises sealing the housing such that the housing is substantially gas and liquid impermeable whereby the plant retaining space of the housing is provided with an atmosphere disposed therein.

21. The method of growing plants of claim 20 wherein, in the step of providing a low profile commercial greenhouse, the housing is provided with at least one aperture whereby the atmosphere provided in the plant retaining space of the housing may be modified by at least one of injecting a disinfectant, injecting water, injecting nutrients, varying oxygen, carbon dioxide, nitrogen and/or other gas concentrations, varying temperature, varying humidity, varying intensity of light or spectrum of light from natural sources and combinations thereof.

22. The method of growing plants of claim 16 wherein, in the step of providing a low profile commercial greenhouse, the housing is substantially gas permeable, and the plant retaining space of the housing is provided with an

atmosphere disposed therein wherein the atmosphere provided in the plant retaining space may be modified by at least one of injecting a disinfectant, injecting water, varying oxygen, carbon dioxide, nitrogen and/or other gas concentrations, varying temperature, varying humidity, varying intensity of light or spectrum of light from natural sources and combinations thereof.

23. The method of growing plants of claim 22 wherein, in the step of providing a low profile commercial greenhouse, the housing is liquid permeable.

24. The method of growing plants of claim 22 wherein, in the step of providing a low profile commercial greenhouse, the housing is substantially liquid impermeable.

25. The method of growing plants of claim 16 wherein, in the step of providing a low profile commercial greenhouse, an artificial light source is provided in the housing, and wherein intensity of light and spectrum of light from the artificial light source can be varied within the housing of the low profile commercial greenhouse.

26. The method of growing plants of claim 16 wherein, in the step of providing a low profile commercial greenhouse, the means for moving plants disposed in

the plant retaining space of the housing in relation to the housing of the low profile commercial greenhouse is further defined as a conveyor system disposed in the plant retaining space of the housing such that plants disposed on the conveyor system can be moved in the plant retaining space and to enhance insertion and/or removal of plants from the plant retaining space of the housing of the low profile commercial greenhouse.

27. The method of growing plants of claim 26 wherein the housing is provided with at least one opening through which the conveyor system extends, thereby providing an entry and/or an exit for plants from the plant retaining space of the housing of the low profile commercial greenhouse.

28. The method of growing plants of claim 16 wherein, in the step of providing a low profile commercial greenhouse, the housing has a cylindrical shape.

29. The method of growing plants of claim 16 wherein, in the step of providing a low profile commercial greenhouse, at least a portion of a sidewall of the housing of the low profile commercial greenhouse is inflatable.

30. The method of growing plants of claim 16 wherein, in the step of providing plants, the plants are selected from the group consisting of botanical items, propagules, vegetables, flowers, herbs, mushrooms, cultures, organisms, and combinations thereof.